

KOMATSU LIMITED

EXECUTIVE ORDER U-R-005-0206 New Off-Road

Compression-Ignition Engines

Pursuant to the authority vested in the Air Resources Board by Sections 43013, 43018, 43101, 43102, 43104 and 43105 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-02-003;

IT IS, ORDERED AND RESOLVED: That the following compression-ignition engine and emission control system produced by the manufacturer are certified as described below for use in off-road equipment. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY	DISPLACEMENT (liters)	FUEL TYPE	USEFUL LIFE (hours)
2005	5KLXL0275AAC	4.5	Diesel	8000
SPECIAL	FEATURES & EMISSION	CONTROL SYSTEMS	TYPICAL EQUIPMENT	APPLICATION
	Direct Diesel Injection, To	urbocharger	Crane, Loader, Tractor, Dozer	, Pump, Compressor

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for hydrocarbon (HC), oxides of nitrogen (NOx), or non-methane hydrocarbon plus oxides of nitrogen (NMHC+NOx), carbon monoxide (CO), and particulate matter (PM) in grams per kilowatt-hour (g/kw-hr), and the opacity-of-smoke certification standards and certification levels in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family (Title 13, California Code of Regulations, (13 CCR) Section 2423):

RATED POWER	EMISSION STANDARD				EXHAUST (g/kw-h	ar)	_	OF	PACITY (%	6)
CLASS	CATEGORY		нс	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
37 ≤ kW < 75	Tier 2	STD	N/A	N/A	7.5	5.0	0.40	20	15	50
			N/A	N/A	4.9	1.4	0.21	4	2	9

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the information and materials to demonstrate certification compliance with 13 CCR Section 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control system warranty).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

This Executive Order is only granted to the engine family and model-year listed above. Engines in this family that are produced for any other model-year are not covered by this Executive Order.

Executed at El Monte, California on this ______ day of November 2004.

Allen Jons, Chief

Mobile Source Operations Division

Engine Model Summary Form ATTACHMENT PS (of)

U-R-005-0206

Manufacturer: Komatsu

Engine category: Nonroad CI

EPA Engine Family: 5KLXL0275AAC

Mfr Family Name: C852

Process Code: New Submission

1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mrvstroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	8.Fuel Rate: 9.Emission Control lbs/hr)@peak torque Device Per SAE J1930
8204;FR91276	S4D102E-2	99@2100	80	37.8	305@1500	94	31.7	DDI,TC,EM *
8204;FR91169	S4D102E-2	99@2500	75	42.1	305@1500	94	31.7	DDI,TC,EM
8204;FR91170	S4D102E-2	99@2200	6/	39.1	305@1500	93	31,4	DDI,TC,EM
8204;FR91171	S4D102E-2	92@2200	72	35.6	300@1500	87	29.3	DDI,TC,EM